

REMARKS

Initially, in the Office Action dated September 10, 2004, the Examiner objects to claims 2 and 7 because of informalities. Claims 1, 2, 5 and 6 have been rejected under 35 U.S.C. §112, second paragraph. Claims 1, 2 and 6 have been rejected under 35 U.S.C. §112, second paragraph. Claims 1, 5 and 6 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,405,021 (Hamabe) in view of U.S. Patent Publication No. 2002/0082038 (Mochizuki). Claims 2, 3, 4, 7 and 8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Hamabe in view of Mochizuki and further in view of U.S. Patent No. 6,628,924 (Miyamoto).

By the present response, Applicants have canceled claims 1, 5 and 6 without disclaimer. Applicants have amended claims 2-4, 7 and 8 to further clarify the invention. Claims 2-4, 7 and 8 remain pending in the present application.

Claim Objections

Claims 2 and 7 have been objected to because of informalities. Applicants have amended these claims to further clarify the invention and respectfully request that these rejections be withdrawn.

35 U.S.C. §112 Rejections

Claims 1, 2, 5 and 6 have been rejected under 35 U.S.C. §112, second paragraph. Applicants have canceled claims 1, 5 and 6, therefore, rendering these rejections moot. Applicants have amended claim 2 to further clarify the invention and respectfully request that these rejections be withdrawn.

35 U.S.C. §103 Rejections

Claims 1, 5 and 6 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Hamabe in view of Mochizuki. Applicants have canceled these claims therefore rendering these rejections moot.

Claims 2, 3, 4, 7 and 8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Hamabe in view of Mochizuki and further in view of Miyamoto. Applicants respectfully traverse these rejections.

Hamabe discloses a signal being prevented from being transmitted from a mobile station to a base station with excessive transmission power for thereby increasing an uplink capacity. The base station compares the reception quality of the signal transmitted from the mobile station with target reception quality, and determines an increment for transmission power of the base station based on a compared result. The base station adds the increment to the transmission power of the base station based on a second control command transmitted from the mobile station, and transmits a first control command for controlling transmission power of the mobile station with transmission power to which the increment has been added. If the reception quality of the signal transmitted from the mobile station becomes greater than the target reception quality, then the increment for the transmission power is increased. If the reception quality of the signal transmitted from the mobile station becomes smaller than the target reception quality, then the increment for the transmission power is reduced.

Mochizuki discloses that during soft handover, base station selector selects the base station that is transmitting the downlink signal with the best downlink reception quality, and notifies the base stations of the ID of this base station, so as to cause only the selected base station to transmit user data. Downlink signal weight decision circuit estimates base stations that have a likelihood of transmitting user data. Downlink TPC command decision circuit uses the downlink signal from the base stations that have a likelihood of transmitting user data, to decide whether the transmission power of the base stations is excessive or insufficient, and to instruct the base stations to increase or decrease their transmission power. Data demodulator uses the downlink signals from base stations that have a likelihood of transmitting user data to demodulate the user data.

Miyamoto discloses a method for controlling a reference SIR used for a closed loop control in a CDMA mobile communications system. When an uplink channel has insufficient communication quality, the reference SIR is increased by a predetermined first increase amount. When the uplink channel has sufficient communication quality, it is determined whether the base station is involved in the closed loop control. When the base station is involved in the closed loop control, the reference SIR is decreased by a predetermined first decrease amount. When the base station is not involved in the closed loop control, the reference SIR is decreased by a predetermined second decrease amount which is greater than the predetermined first decrease amount.

Regarding claims 2, 7 and 8, Applicants submit that none of the cited references, taken alone or in any proper combination, disclose, suggest or render obvious the limitations in the combination of each of these claims of, inter alia, each base station for measuring received power of radio waves transmitted from terminal stations when there is a radio wave having received power being higher than a first threshold value which is set by a predetermined procedure, sends power control signal instructing the terminal station which has transmitted the radio wave having received power being higher than the first threshold value to decrease the transmission power, or each of the terminal stations for decreasing the transmission power when at least one power control signal which gives an instruction to decrease in the transmission power exists in signals transmitted from the base stations, increasing the transmission power when the power control signal for giving an instruction to decrease the transmission power does not exist, comparing received powers of radio waves transmitted from the base stations with each other, selecting the base station which has transmitted the radio waves with the highest power, and transmitting a signal on which an identification code for identifying the base station is superimposed, or a second threshold value larger than the first threshold value where in the case where the received power of the radio waves transmitted from the terminal station is higher than the second threshold value when the identification code transmitted from the terminal station indicates another station, the base station transmitting the power control signal for instructing the terminal station to decrease the transmission power, or a base station that includes a threshold memorizing part

for holding a first threshold value and a second threshold value higher than the first threshold value, a comparing part for comparing the received power measured by the received power measuring part with the first and second threshold values, and power control signal generating means for generating, in accordance with a result of the comparing part, a power down control signal for instructing the specific terminal station to decrease the transmission power when the identification code transmitted from the specific terminal station indicates the own station and the measured received power is higher than the first threshold value, or when the identification code sent from the specific terminal station indicates another station and the received power of the radio wave transmitted from the specific terminal station is higher than the second threshold value.

The limitations in the claims of the present application solve a problem that occurs when a base station operating at best communication condition of downlink communication and a base station operating at best condition of uplink communication state are different base stations. The problem is explained in Applicants' specification at page 5, line 26 – page 10, line 19. According to the limitations in the claims of the present application, a terminal station may receive downlink communication from a base station with the best downlink communication state and may transmit uplink communication to a different base station which has an uplink communication state which is the best. In contrast, all of the cited references, Hamabe, Mochizuki and Miyamoto, disclose situations where a base station of which a downlink communication state is best and a base station of which

uplink communication state is best are the same base station. Hamabe discloses a base station (BTS) 10b that has higher downstream SIR than that of BTS 10a. That is, the communication condition of BTS 10b is better than that of BTS 10a. Base station 10b has lower path loss of uplink than that of BTS 10a. Thus, the communication condition of BTS 10b is better than that of BTS 10a. Accordingly, both the up and downlink communication conditions of BTS 10b are better than BTS 10a (see Fig. 10).

Similarly, Mochizuki discloses implicitly that a BTS of which uplink transmission is bad is also in bad condition of a downlink environment. A BTS which a mobile station does not intend to use (or a BTS of which downlink transmission environment is bad) is also in a bad uplink transmission environment. Mochizuki discloses a problem that base station ID (one of up control signal) is not received normally (see paragraphs 44 and 45).

Moreover, Miyamoto discloses that at least communication conditions with base stations 401 are good in both uplink and downlink (see col. 13, lower part and Fig. 8). Therefore, Miyamoto premises that a base station having good uplink transmission environment also has a good downlink transmission environment. If it is a premise that a base station of which downlink transmission state is best and a base station of which uplink communication state is best are the same, the second threshold value used in other base station is higher than the first threshold value used in a base station having best downlink communication state by a closed loop automatic control (as the Examiner has described and as shown in Miyamoto).

However, in a case that a base station of which downlink communication state is best and a base station of which uplink communication state is best, are different, by the performing of the closed loop automatic control, the second threshold value used in other base station becomes lower than the first threshold value used in a base station having best downlink communication state. Accordingly, uplink communication with the base station of which downstream communication state is best is carried under insufficient communication quality.

Accordingly, Applicants submit that none of the cited references, taken alone or in any proper combination, disclose, suggest or render obvious the limitations in the combination of each of claims 2, 3, 4, 7 and 8 of the present application. Applicants respectfully request that these rejections be withdrawn and that these claims be allowed.

In view of the foregoing amendments and remarks, Applicants submit that claims 2, 3, 4, 7 and 8 are now in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

U.S. Application No. 10/078,381

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger & Malur, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 520.41228X00).

Respectfully submitted,

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